

**Deployment Workshop Project Updates
September 2006**

#	Project Name	Project Description	DRI Project Manager	Customer Contact	Status Report
1	Transfer Tank Longitudinal Sealer (TTLS)	The TTLS system consists of 2 separate independent machines (seal application truck and sealant supply transfer trailer) that are only connected briefly to transfer sealant. TTLS allows an operator to seal longitudinal cracks within a moving lane closure inside the truck cab without being exposed to highway traffic and hot sealant.	Arvern Lofton	Nate Cradle, Maintenance	Maintenance has not been using the TTLS due to slow heating time of the kettle, almost 7 hours. Kettle is damaged due to coking. AHMCT has purchased a new kettle, which takes only an hour to heat. Maintenance also expressed an interest in a crack blower on the front and a wand on the back to cover transverse cracks. AHMCT is working to achieve these suggestions from maintenance. Maintenance has said the device is very useful to cover longitudinal roadside cracks on the shoulders. Valley Slurry Seal may be interested in purchasing the TTLS and renting to Caltrans under one discussed business case model.
2	Telerobotic Roadway Debris VACuum System (ARDVAC)	The ARDVAC unit is a vacuum truck with an articulating nozzle attached to a boom arm. An operator can maneuver the nozzle to vacuum up debris in difficult to reach places while remaining inside the vehicle cab and not exposed to highway traffic.	Arvern Lofton	Nate Cradle, Maintenance	Vendor Clean Earth is in bankruptcy and has been purchased by another company. The new company may not be able to deliver the two promised units and other vendors are being considered. Patent revocation or a reduced patent license is being considered if units are not delivered. Maintenance has expressed a strong interest in having the units. Funding to purchase units may be sunsetting.
3	Bridge Height Measurement System	A vehicle mounted, measuring device utilizes a laser scanner	Arvern Lofton	Rick Jorgensen, Structures Maintenance	A kick-off meeting was held on 8/3/2005 with representatives from DOE, Structures Maintenance, and DRI. The prototype is

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		to provide a 3-D model of a scanned bridge infrastructure while the vehicle is moving. The product allows Structure Maintenance workers to collect minimum vertical and horizontal measurements of bridge infrastructures while remaining inside the vehicle and off the highway.			being enhanced for the customer to use and for the customer to provide feedback on. The prototype is scheduled to be ready and turned over to Structures Maintenance at end of the 4th Quarter of FY 05/06 to field test and use. Anticipated next meeting with the customer will be around 6/26/2006. Testing and customer feedback will continue through Summer 2006. Project is within the allocated budget.
4	A Risk Assessment and Cost Analysis for the Mobile Workzone Protection Device (Balsi Beam)	Development of information for use by Division of Maintenance for the placement of the Balsi Beam.	Mike Jenkinson	Nate Cradle, Maintenance	AHMCT has completed their review of the national data on accidents in work zones, which resulted in facilities and have done some rough estimation on the State only work zone accident information. Meetings are on going between Safety and AHMCT on how to fill the data gaps. Due to the Caltrans legal's decision to limit release of technical information, AHMCT has been delayed on development of the computer model for the Balsi Beam and will be requesting a no cost time extension.
5	Construction Analysis for Pavement Rehabilitation Strategies (CA4PRS)	Pavement construction operation analysis, which establishes the least delays and most	Michael Samadian	Mary Beth Herritt, Design	Project is in deployment phase and has been deployed on several projects in California as well as other States. New upgrade version is under development.

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		economical roadway closure scenario.			
6	Inductive Signature Technology (IST) Loop Detector Card	Advanced inductive loop detector card	Joe Palen	Vic Barbaric, D4	A major benefit of the IST Loop Detector cards is that they have the sensitivity to collect data from loops of different shapes and sizes, such as "blade" style loops that are easier to install and that generate crisper information than conventional loops. Some blade loops were recently purchased for evaluation, and initial testing was completed with favorable results. We are continuing to analyze the data from this evaluation in order to reach a final conclusion.
7	Efficient Development of Advanced Public Transportation Systems (EDAPTS) Smart Transit System	Low cost ITS for small transit agencies. Uses performance for cost trade-off and capitalizes on unused infrastructure.	Bruce Chapman	Gail Ogawa, Mass Transportation	New projects to develop performance specifications, cost benefits and updated system demo at Cal Poly Pomona. Working with CCIT on developing commercialization path.

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8	ITS Decision, Gateway to Understanding and Applying ITS.	<p>Project is to build a Web-based ITS Information, Planning, and Decision Support clearinghouse. Clearinghouse, named ITS Decision, Gateway to Understanding and Applying ITS, is to provide overall overview of the deployment of ITS products and services at local, state, national, and international locations where they have been deployed, provide an overview of their costs and benefits, risks and roadblocks, and lessons learned. Project will also incorporate the Expert System (ES) and Case-based Reasoning (CBR) modules, and will include a section on ITS Architecture and Architecture conformity.</p>	Mohamed AlKadri	Reza Navai, Planning	<p>A working version has been deployed and can be accessed at www.CalCCIT.org/itsdecision. Currently, ITS Decision project deployment and technology evaluations are still being updated as information becomes available on the 27 ITS technologies. PIs plan to incorporate newly emerging ITS technologies. Elementary ES model has been developed and posted. Advanced ES model for deploying 3 ITS technologies is being developed with three modules as follows: 1. Ramp Metering Installation Assessment2. Freeway Service Patrol3. Automatic Vehicle Location for Transit Vehicles4. Electronic Toll Collection (ETC) A CBR module covering 3 ITS technologies has been developed and the tool is now available for use. Next, PIs will develop 6 more modules as follows: 1. Ramp Metering (based on audience and known customer needs) 2. ATIS (based on the research team's suggestion and known customer needs) 3. ETC (based on research team's suggestion and known customer needs) 4. Corridor Signal Coordination (based on Caltrans-Planning suggestion) 5. Automatic Weigh Stations/W-I-M (based on team & DR&I suggestions and customer needs). 6. One</p>

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					more case to be determined by Caltrans September 30, 2006, if data adequate become available.
9	Development of Business Cases for Deployment of AHMCT Projects	This project develops business cases to support the deployment of advanced technologies into the Caltrans work place. Specifically, the business cases will be developed for machines originating from the AHMCT Research Center and from Caltrans. Business case analysis can facilitate the deployment of new technology. This project aims to develop approximately four per year starting with the most promising projects at the highest stages of deployment.	Bob Meline	TTLS: Courtney Morrison, Maintenance ArdVAC: Sheree Edwards Nate Cradle, Maintenance	Business cases for the TTLS and ARDVAC have been delivered and presented. The Automated Cone Machine is under development.
10	WeatherShare, Phase II	WeatherShare is a web site that provides relevant road weather information that is easily accessible by incident responders and	Mandy Chu	Ian Turnbull, D-2 Operations	A project advisory panel was formed to provide feedback from an end-user perspective. The kick off meeting took place Aug 06.

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		the traveling public. WeatherShare streamlines and integrates road weather data from various sources such as RWIS, CDEC, and MADIS into one single source. . Phase 2 of the project will prepare the system for full deployment.			
11	Responder Study Phase II	The Responder System uses a Tablet PC for collecting, tracking and sharing incident information between at-scene responders, the Redding Traffic Operations Center (TOC) and secondary incident responders, facilitating management of the incident scene and improving the effectiveness of response activities. Phase 2 of the project will prepare the system for full corporate deployment.	Mandy Chu	Jeff Kiser, D-2 Maintenance	A project advisory panel was formed to provide feedback from an end-user perspective. The kick off meeting took place Aug 06. At the meeting a Responder Unit was delivered, this unit was purchased by Caltrans Div. Of Maintenance. D2 also decided to buy their own unit. The evaluation of the units will be completed by WTI as part of this project.

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12	Adaptive Transit Signal Priority (ATSP)	An ATSP that reduces bus travel time through traffic signals while limiting the impact on the rest of traffic and maintaining pedestrian safety.	Z. Sonja Sun	Gail Ogawa, Mass Transportation	The current project to work with partners including SamTrans, Caltrans D4 and TO, PATH and Orbital to implement the system at over 20 intersections along SamTrans route 390 and 391 at El Camino Real corridor (State highway 82).
13	Smart Parking	Smart Parking uses advanced technology to provide real-time transit parking information to direct highway drivers to available parking spaces at a transit station. It also enables drivers to make advance reservations for parking at transit stations thus reducing the frustration of trying to find an available space.	Jeffrey Spencer	Gail Ogawa, Mass Transportation	Currently in evaluation phase. Ready for further deployment by completing/ implementing scaled-engineering. Current approved 06/07 proposal includes deployment in San Francisco and San Diego.

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14	Electric Bus with Zebra Battery	The project developed a power system that has an uncharged range of over 130 miles in a typical urban-transit duty cycle, enough to cover about half of the urban-transit routes in California. Acceleration and hill climbing are superior to other alternatively fueled buses and most diesel buses.	Jeffrey Spencer	Gail Ogawa, Mass Transportation	Project completed September 2003. Project is inactive. Further studies have been completed without Caltrans funding or involvement. Deployment was cancelled by OEM due to small market share. Current research proposal includes wayside fast recharge capabilities. Project was approved for 05/06, but tabled due to funding shortfalls.